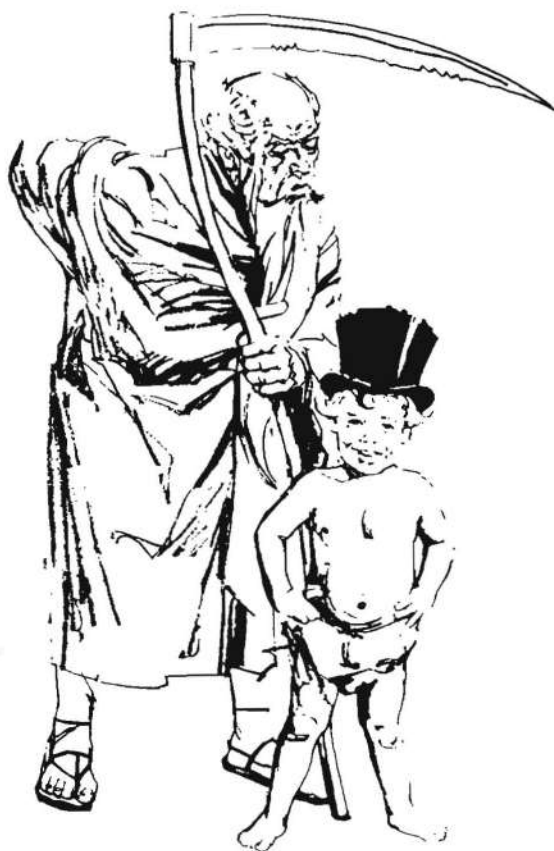


CALIFORNIA CHIROPRACTIC COLLEGES

LOS ANGELES COLLEGE OF CHIROPRACTIC

The Chirogram

THE CHIROPRACTIC PHYSICIAN JANUARY 1975, VOL. 42, NO. 1



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Fees:	Preregistration	\$35	Fees:	Preregistration	\$40
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Sat-Sun.	January	18-19	*Wed-Thu.	May	21-22
Sat-Sun.	February	15-16	San Francisco		
Sat-Sun.	March	15-16	(Hotel to be announced)		
Sat-Sun.	April	19-20	Sat-Sun.	June	21-22
Sat-Sun.	August	16-17	Sacramento (Airport Host Hotel)		
Sat-Sun.	September	20-21	Sat-Sun.	July	19-20
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EDITORIAL COMMENT



BACKWARD — LOOK FORWARD

We rode down the street of the town in which we were born.

We were looking for the large house in which we spent our childhood, with its great central hallway, with large rooms opening on either side - and for the spacious rear yard, wherein we travelled many miles via tricycle - later on a scooter.

We drove past the address twice before we recognized it.

It was far from large and imposing - in fact, it was a very small house.

We knocked on the door, and explained to the lady living there that we had spent our childhood in that house, and would like to look around out back.

As we talked with the lady, we could see down the great hallway, now pitifully shrunk to barely over six feet wide, with rooms just as tiny opening from it.

Then to the back - and the spacious yard had been transformed into a wee patch of green, typical of those found behind many city dwellings.

We turned away. We felt cheated!

We had looked forward to going back to the city and the place of our birth — and now we realized that we can never go back. The past cannot be reclaimed. The roses of yesterday have faded, and the magic of years gone by have silently slipped into oblivion.

And so it is with the passing of the old year, and the birth of the new!

We leave the old year with regret, it has been good to us, but it is gone! It can never return — not even in accurate memory.

And like a clerk with a brand new ledger, we are handed a bright and clean new year, upon which to write the events of our lives.

We must write carefully, for we may tinge it with the golden hue of fond memory, or may besmirch its pages with regrets. It may, in memory, survive as meaningful and magnificent — or it may become small and insignificant — it's up to us.

So cheers to the memory of 1974, which we hope was well spent, and a hearty and expectant welcome to the sparkling future of '75.

May it be kind to you — and may you use it well!

HAPPY NEW YEAR TO YOU ALL!

JDK

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THE CHIROPRACTIC PHYSICIAN

JANUARY 1975, VOL. 42, NO. 1

*Dedicated to the dissemination of current and research information
relative to the field of Chiropractic Therapeutics*

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HEADACHES AND THEIR CAUSES Part 1

by G. J. Petersen, Ph. D.

This is the first of a series of articles on headache. It brings together the latest findings concerning this age old malady. In the first article, Dr. Peterson introduces the subject with a general discussion of headaches, the types, causes and progressions. In later articles, he will compare the chiropractic, medical and psychological management of headaches. This series neither promotes, nor invalidates any school of therapy, but rather seeks to bring to the practicing chiropractic physician the latest information from all disciplines, thus enabling him to more thoroughly understand and evaluate the patient presenting himself for treatment, and to understand and be able to discuss other modes of treatment the patient may be, or may have been receiving. Ed.

It's possible to meet someone who never had a headache, but it isn't likely. Man has certainly been suffering headaches for longer than all of recorded history, and he'd hardly started writing before he made note of his aching head. At least, a Sumerian poet of 3000 B.C. complains about the poet's throbbing skull. Today "I get headaches" is just about the most common complaint heard by all doctors. While numerous diseases and injuries can cause headaches, by far most of them are ordinary "tension" headaches, and most of the rest are migraine. Both are connected with the relationship of the sufferer to the world around him, with the way he lives and reacts to his external conditions.

The usual ways the patient deals with either of the more common headaches depends on the orientation of the patient to the healing arts - he may utilize chiropractic manipulation, consult a medical doctor, bear it, or take an analgesic (usually aspirin) on his own.

As ordinary headaches were long viewed as a sort of unavoidable curse, it took centuries before anyone thought of making a medical specialty of them. As a result it was just as long a time before patient or doctor could have access to any really good center of expertise about headaches.

This is not true today.

There is a connection between migraine and the blood vessels of the head. There is also a connection between the great majority of headaches with the mental and emotional hangups of the sufferer. The real heroes of headache research are the patients. There are legions of them. And many are doomed to suffer for a while yet, because there is still much we do not know about their affliction.

Some unlucky individuals suffer from more than one variety. But on the whole, headache victims divide into two main classes: those who suddenly begin feeling headache pain that didn't exist be-

fore; and those with chronic headache, the kind that comes and goes, and may come again and again.

As every doctor knows, there are many patients who love to fear the worst. When they feel a severe headache, especially when it is sudden and new, they are likely to decide immediately that they have a brain tumor or a blood clot or are going mad or something equally horrific; they are rarely right.

Headaches, both the sudden kind and the chronic, repeating ones, are a sign of something wrong, but it isn't often that they are symptoms of either a serious or a mild physical illness. While a physical injury may cause temporary headaches, it is rare that the one may bring on constantly recurring ones, though imaginative individuals who were recently shaken up in a car-riding accident (as who hasn't been?) often are sure that there's some unsuspected head lesion, like a fracture of the skull. Then again, he may want to prolong his vacation paid by Workman's Compensation insurance, or to increase the amount of money he hopes to obtain in a suit.

Continuing headaches (as opposed to few) which directly result from injury are so unusual that they are not included in the 19 classifications of headaches. Headaches that appear after a blow on the head or a "whiplash" strain of the neck sometimes are blamed on the blow or the strain. But most often they have other, less obvious causes, and the injury - which may have been repaired long ago - only started as a symptom.

Another common complaint heard by the physician is, "I have had this headache ever since they gave me a spinal anesthetic for my surgery." This complaint is equally debatable.

One cause may be the scare of the accident or the incident, and the nagging memory of the experience.

All the same, a release prepared by the Information Office of the National Institute of Neurological Diseases and Blindness lists "headaches following a blow on the head" as one of the kinds that are "alarm signals for prompt and thorough physical check-up". Other kinds on the list are:

A sudden, severe headache coming "out of the blue"; headache related to fever; headache associated with convulsions; confusion and lessening of consciousness, with headache added; headache going along with pain in the eye, ear or elsewhere, or headache that appears in an older person who never had it before.

Such headaches, though some of them are life-threatening, have the advantage of being tied in with some specific physical condition that often can be found and corrected. It may be an ear infection or growth; or trouble with the teeth; high blood pressure, or something wrong with the eyes, such as the excessive intraocular pressure of glaucoma. Investigating such a glaucoma-based headache may not only stop the headaches, but also save the individual's sight - for glaucoma if neglected, can lead to blindness.

Headaches based on tumors, blood clots, abscesses and other such intracranial findings that displace blood vessels and nerves around them are called traction headaches. Infections anywhere in the body that bring on fever may be the starting point of a headache. So may any intracranial inflammation, caused by an infection, or by anything else. And then there are multiple outside causes of the occasional or one-time headache, ranging from carbon-monoxide poisoning resulting from being caught in heavy traffic to certain allergic reactions and on down to that old friend of many good men, the hangover.

The list of correctable physical causes is a long one. Unfortunately, there are also some purely physical causes that are not easy to banish. One, for example, is neuralgia, a very painful nerve condition. When it occurs in the trigeminal or glossopharyngeal nerve, it is classed as headache, though it is actually located in the neck and face. Trigeminal neuralgia, also known as tic douloureux, is one of the most painful afflictions of mankind, and in some patients responds only to surgery.

And yet, for all their number and popularity (if that's the word), the headaches so far described are not the ones people who go in for "headache talk" are generally speaking about.

In over 15,000 hopeful sufferers, nine out of ten of them have either migraine headaches or tension headaches or both. That's the name of the game for most headache victims.

The tension headache is the common man's type. It counts more victims than any other. Migraine headaches are often more painful and also a little more select. In fact, some investigators say it's quite flattering to be classed among migraine sufferers, for they seem to be a brainy and talented group. But they are also aggressive, perfectionistic and basically unsure of themselves.

These two types of recurring head pain strike otherwise reasonably healthy individuals. We call such headaches "benign" - not because they are gentle and kind (they are not), but because they are no deadly threat. They are subjective, having no definite physical cause and giving almost no outward, or objective signs. We have to take the patient's word for what he is feeling and when.

Not that physical conditions have no connection with migraine and tension headaches. The old headache veteran who claims that his torture episodes are brought on by hunger, constipation, too much sun, eyestrain or the like is not entirely wrong. But these things, when they do play a part, are triggers, rather than causes. They set the powder train burning; the headache explosion that follows gets its power from deeper sources.

Tension headaches are subject to triggering by such things more often than migraine. But, thanks to the complex and still somewhat mysterious sources of headaches, even some of the triggers are obscure. For example, an emotional upset, a scare or a surge of anger may be a trigger, though the patient may not even be aware that he felt such a thing. In addition, the physical causes mentioned above - illnesses, traumatic injuries, allergies and the like, as well as a sleepless night, too much alcohol, a day in the sun and so on - probably

would not cause a headache in a nonsusceptible individual. But they do in someone who is already prone to tension or migraine headaches.

The wonder is that so much has been found out about headaches with little evidence other than the voiced complaints of patients, with few outward signs or unbiased mechanical devices to inform them.

An early question, for example, was: Where does this unseen, unmeasurable pain actually come from? What are its mechanics?

The answer: Migraine and migraine-type headaches (there are several) are "vascular"; they involve changes in the blood vessels. Tension headaches, in contrast, start with "muscle contraction", chiefly in the muscles at the back of the neck. Blood vessel pressures from the tight muscles may have a later effect.

The root of the headache is not inside the head. The brain itself is not involved. The guilty blood vessels and head muscles are mostly outside the skull.

Before the start of a migraine attack, the blood vessels of the head contract. The flow of blood to the brain is slowed. Soon they expand again, and a pulsing rush of blood goes through them. That's when the pain begins.

Why this is so, has long been a baffling puzzle. Blood vessels in various parts of the body often contract and expand - contract in the cold, expand in a hot bath. Researchers have inserted small balloons into the arteries of the head and expanded them. It did not cause pain. Why should similar maneuvers in the blood vessels of a migraine victim result in excruciating agony?

It was found that certain natural substances, such as bradykinin, serotonin, histamine and neurokinin accumulate in the tissues around the arteries during a migraine. It was thought the puzzle was solved. The presence of the substances (which seem to lower the pain threshold - the point at which pain is felt), combined with the expanded, pulsating blood vessels, must, the researchers said, create pain in the tissues.

Then came the discovery that the drug methysergide, known as a strong antagonist of serotonin, often gave migraine sufferers preventive relief. That seemed to prove it.

More research found few signs of interaction between serotonin in the head and methysergide given to a patient. How methysergide works to prevent a migraine attack is not known, but inhibiting the local serotonin supply certainly does not seem to be the answer. By the same token, one of the normally-present body substances like serotonin or histamine may indeed be a partner in creating headache pain, but we have no idea which one it is.

More important than pain mechanics, however, from the viewpoint of the sufferer, at least, is the knowledge we now have of the surrounding circumstances - triggers, precipitating factors, personality traits - that are the real key to migraine and tension headaches. These things can often be changed or obliterated - and with them, maybe the headaches.

TO BE CONTINUED

1. Saltman, Jules; WHAT WE KNOW ABOUT HEADACHES
 2. Friedman, M. D., Arnold P.; of the Montefiore Hospital, Headache Unit, Brkln, N.Y.
 3. The World Federation of Neurologists, Research Group of Migraine and Headache, by various scientists representing ten different countries.
 4. Wolff, Harold G., Cornell University Medical Center
 5. Graham, John R., Harvard Medical School, Faulkner Hospital Headache Research Foundation, Boston, Mass.
 6. Federico Sicuteri; The University of Florence, Italy.
 7. The National Institute of Neurological Diseases and Blindness
 8. Ostfield, Adrian; researcher in headaches, University of Illinois School of Medicine.
-



The Eyes in Diagnosis

By William L. Benedict

One glance at the child brought into the Welfare Clinic by an anxious mother told the attending physician that here was another victim of malnutrition. The drawn mouth, dry lips, sunken-dry eyes, the foamy secretion on the lid margins and the white, foamy triangular spots at the margins of the corneas spelled out the diagnosis of malnutrition and vitamin A deficiency. An accompanying symptom that could be surmised but not seen was contributed by the mother—the child could no

longer see in the dark. Relationship between dietary deficiency and night blindness has been known since antiquity. One hundred years ago Bitot published his observations on corneal and conjunctival changes now known to be symptoms of vitamin deficiency.

The visual signs and symptoms of disease and functional disorders are materials which the clinician uses in making a diagnosis. Visual observations supplemented by the patients' complaints and physical data are

compared and considered in relation to other factors such as age, race, environment, season, climate, geographic economics and heredity. What may seem to be an insignificant gesture or a thoughtless movement may be interpreted by a skilled medical observer as characteristic of a pattern common to a nervous disorder, an advancing physical deterioration, a temporary instability due to influences from within or without, or a sign of impending change not yet otherwise clearly revealed. To him the sign serves as a code that he has learned to interpret.

Unconsciously as the clinician scans a patient concepts of disease patterns take form in the background of his mind. By inspection alone he quickly sets up his line of further investigation for evidence that supports or alters his first impressions. Visual impressions do not need to be expressed or recorded immediately. They are the substance of unconscious conceptions of entities that have already been planted in the mind. As the holes in a punchcard activate the computer, these quickly observed visual impressions stimulate associations that belong to a concept of recognized clinical significance.

In the course of a general physical examination, which of course includes the use of optical equipment, the doctor first views the patient in an over-all screening that takes in size, shape, color, motion, expression and impressions that are quickly and automatically rejected or retained for further scrutiny and evaluation. By means of visual examination alone many diseases may be identified.

Ocular pemphigus has various causes, having all a common characteristic—the formation of cicatricial adhesions in the conjunctiva. In those cases in which the ocular lesions are accompanied by bullous lesions of the skin, the illness is easy to diagnose. But in the cases in which the lesions are limited to the eyes, it is very difficult to make the

diagnosis between ocular pemphigus and other mucocutaneous syndromes. No reliable data exist up to now on the etiology of this disease.

The physical characteristics seen in congenital abnormalities; the sunken nose and notched teeth of congenital lues; discoloration of the skin, hair and eyes as indications of chronic Harada's disease;—a quick glance at the patient often reveals clues that to the astute examiner guide further investigation through other than visual channels. The old adage that 90 percent of one's knowledge is gained through use of his eyes may still be true when applied to the problems of diagnosing diseases.

Using the Patient's Eyes— And the Physician's

Several aspects of the use of the eyes in diagnosing disease have been suggested, each capable of being built up in usefulness by training and scientific development:

1. The use of the physician's eyes as visual means of examination—what the doctor sees when he looks at the patient with the unaided eye or when he uses optical instruments such as a magnifying loup, biomicroscope, endoscope, oscilloscope; in making and reading of records.

2. Signs of local and systemic diseases are revealed by changes in the patient's eyes. In some instances the signs are pathognomonic. Direct observation reveals changes in the cornea, conjunctiva, iris and pupil that are immediately recognized as symptoms of well-known disorders. Tests of ocular motility, visual acuity, visual fields, pupil reactions and color vision may help to arrive at a definitive diagnosis of neurologic conditions not otherwise conclusive.

3. Ophthalmoscopy is a valuable diagnostic aid to the extent that in some systemic diseases there are characteristic changes in the fundus of the eye. Diseases of the eye structures alone, such as neoplasms and retrolental fibroplasia, are, of course, recognized on sight. Ophthalmoscopy

has a most useful diagnostic role in physical examination in that some vascular diseases cause changes in the ocular fundus that are visible because of the transparency of the tissues, through which the vascular trees of the retina are clearly observed under 10x or greater magnification. Consequently, ophthalmoscopy has become an important scientific subject for study by internists and neurologists as well as by ophthalmologists.

4. Perimetry, a rapidly developing ocular diagnostic science is the process of localizing lesions along the visual pathway from the retina to the visual cortex of the brain. This and other areas of diagnostic usefulness will be considered in more detail with citations of special application.

As already mentioned some diseases cause changes in the color and appearance of the skin and hair that can be detected by visual inspection. One noticeable example is the distinctive change of the skin of the face and the consequent characteristic facial expression of vitamin deficiency. Probably a deficiency of any of the vitamins can have noticeably adverse effects on the eye, but only some are of diagnostic importance. In vitamin A deficiency the conjunctiva is dull, wrinkled, dry and of a smoky color. Somerset describes the progressive changes in the conjunctiva and cornea with xerosis and Bitot's spots as often the earliest and most definite of signs:

Vitamin A deficiency in man chiefly manifests itself by changes in the eye and skin. It is seen most commonly in infants in which the eye signs may be very severe and lead rapidly to blindness.

Adults also complain of night blindness and this may be regarded as the first manifestation of vitamin A deficiency. There are triangular white spots composed of masses of xerosis bacilli, fatty globules and other debris on the conjunctiva at the limbus on either side of the cornea.

These early signs in an infant always denote vitamin A deficiency.

Slit Lamp

In Herrick's anemia, sickle cell disease, a characteristic vascular pattern is discernible when the conjunctiva of a patient with this disease is examined by means of a slit lamp. The appearance is that of "multiple, short, comma-shaped or curled capillary segments which often are seemingly isolated from the vascular network, in that the afferent and efferent lumens have become devoid of blood."²

In a number of systemic infectious diseases the anterior segment of the eye undergoes changes of an inflammatory character that require close observation for differentiation yet are of diagnostic significance. The general diseases that shows more ocular involvement than any other is leprosy. Early iritis occurs so insidiously as to be almost symptomless but, nevertheless, leads to blindness. There is early vascularization of the cornea which can only be seen by the use of a magnifying lens.

Corneal limbal injection and proliferative vascular infiltration occur in a number of local eye diseases such as trachoma and keratoconjunctivitis and in systemic diseases such as leprosy and congenital syphilis. The vessels that invade the cornea are always from the arterial side. They invade certain layers of the cornea and follow a characteristic pattern of arborization. While a trained observer may do with a magnifying loup and good focal illumination, the higher power and condensed light of the slit lamp bring out in perspective detail the specific arrangement of vessels that makes certain the disease at fault.

Among the optical instruments used in examination of the eye the slit lamp is the most useful. It makes possible the diagnosis by direct visual inspection of some diseases that otherwise could be identified only by inference and deduction from results of other tests. The essential feature

of the slit lamp is controlled illumination by a narrow beam or shaft of light. Tissues in the path of this light can be observed by means of a binocular microscope with magnification sufficient to visualize the blood corpuscles as they circulate through the capillaries of the cornea and conjunctiva. Cellular debris can be seen in the aqueous and vitreous, and early changes in the crystalline lens can be detected long before they cause visual disturbance. One of the most startling observations to be made by the slit lamp is the swarming movements of *Onchocerca* in the anterior chamber of the eye of a patient infested with this organism.

The diagnostic possibilities of the slit lamp have resulted in numerous books and atlases that depict the distinctive features of the pathologic changes in the eye, not only in the conjunctiva, cornea, iris and lens, but in the vitreous and the ocular fundus.

Ophthalmoscopy

Refinements of ophthalmoscopes and ophthalmic technique have been introduced; every year sees further advances, and ophthalmoscopy is now recognized as a form of biomicroscopy. The interpretation of the appearance of the fundus oculi, at which we aim, involves both biomicroscopy and necromicroscopy and demands familiarity with the appropriate instruments and methods.³

With the invention of the ophthalmoscope, the eye became a fertile field for study of symptoms produced by local and systemic disease. Ophthalmoscopy revealed in living color processes taking place in organs throughout the body but previously known largely through pathologic anatomy as shown by the microscope.

Now there are two methods for study of the same pathologic changes. First, with the ophthalmoscope, deep living tissues are visualized under a magnification of approximately 14.5 diameters. The same tissues are also

studied in the laboratory, after proper processing, by light microscopy, electron microscopy, and electronic and chemical processes. Comparison of capillary structures of the eye and kidney, for example, in vascular disease and in vascular changes found in certain systemic diseases, has greatly aided in differentiating diagnostic entities within a system category, such as hypertension, arteriosclerosis, atherosclerosis and diabetes.

The fundus picture of some diseases is characteristic and of some pathognomonic. By means of filters the light beam may be altered to eliminate certain rays, particularly red rays. Red-free light reveals features not seen when unfiltered light is used. Ophthalmoscopy has become a science. Not only are ophthalmologists concerned with the eye, but internists and neurologists use the eye consistently for diagnostic assistance. A routine physical examination is not complete without a thorough scrutiny of the ocular fundus.

There are striking examples of use of the eye in diagnosing disease by ophthalmoscopy and more are being added through research. An unusual case was recorded of widely disseminated and rapidly fatal malignant lymphoma in which the presenting signs and symptoms as well as all subsequent physical findings were limited to the eyes. All laboratory investigations were essentially non-contributory, and the diagnosis was made only at postmortem examination.⁴

Direct observation of retinal vessels is directed to the caliber of the arterioles and the thickness and flexibility of the vessel walls. In the normal state the walls of the arterioles and capillaries are invisible, so that the light reflex and the color of the blood column must be regarded as revealing the vessels' characteristics.

Vascular diseases that influence or are influenced by blood pressure are often strikingly revealed in the fundus. Artificially produced varia-

tions in blood pressure result in changes in the fundus from which it may be assumed that in tissues where similar vessels cannot be seen—such, for example, as the renal glomeruli—similar changes take place.

Circulation and blood flow in the retina and choroid can be measured by manometric methods and the pressure in retinal arterioles estimated. Introduction of dyes and chemical substances into the blood stream is used in the study of the effects of drugs on circulation through changes in the appearance of retinal vessels and the color of the optic disk and relative pallor of the macular area.

The classical studies have, of course, been in vascular disease, because the blood vessels of the retina and choroid are visible as are blood vessels nowhere else in the body at any time or condition. Some of the earliest reports of fundus examination by ophthalmoscopy concerned the vascular trees of the retina because the vessels were clearly visualized and were known to be terminal vessels, arterial and venous with intervening capillaries, and were known to follow an anatomical pattern.

Recently considerable attention has been directed to ocular indications of vascular occlusion in the carotid and other arteries than supply the central nervous system. The ophthalmoscopic examination shows the changes in blood pressure, volume and rate of flow. The evidence obtained through eye examination may be conclusive in doubtful cases where response to questioning and reflex testing is impossible because of extensive cerebral damage and unconsciousness.

Much has been learned through long observation of changes in the ocular fundus that may be attributed to senility as opposed to chronic disease and intermittent variations in metabolism, nutrition and environment. In certain controlled areas such as homes for the aged it has been possible to keep records of re-

peated fundus examinations of a number of aging persons for more than 20 years. Is arteriosclerosis a natural result of aging or is it initiated and promoted by hypertension? What role does heredity play in racial variations that seem to throw doubt on the etiology of diseases that are endemic or geographically and racially predominant?

The eyes of small animals are used to study the effects of planned diets and administration of drugs on the vascular system and to compare the changes in the fundus of animals resulting from induced diseases such as diabetes. The identity of the changes seen in the eyes of animals with those in human beings is generally accepted. The course of the disease in the small animal is comparable to that in man, but the time is much shorter. Much of the research in the area of systemic and metabolic disease and particularly in nutrition has been done on small animals in the laboratory under controlled conditions.

Ocular Signs of General Disease

Eye signs of general disease are so common that an ophthalmoscope has been for years an essential instrument for every competent physician, and no physical examination is really thorough or complete without an examination of the fundi. However, it is only comparatively recently that the value of ophthalmoscopic examination in the diagnosis and prognosis of arterial disease has been recognized. The central artery of the retina, which is visible under magnification in favorable cases, is the only artery in the body where arterial disease can be seen. Branches of the central artery are recognizable as arterioles as they progress to the size of capillaries from where the vascular return system of the retinal veins forms the counterpart of the arterial tree. As the retinal vessels do not anastomose, a characteristic pathologic change may be limited to a single vessel and the area supplied by it.

The various retinal manifestations

of general disease are properly referred to as retinopathies. Some have the appearance of inflammatory reactions and are referred to as retinitis. Others are designated as degenerations while some are mixed. The retinopathies most familiar to the internist are seen as the result of vascular disease and blood dyscrasia. Arteriosclerotic, hypertensive, renal, diabetic, leukemic, thrombotic and a number of less frequent but meaningful pictures are seen in the fundi as nowhere else in the human anatomy and are distinctly of diagnostic importance.

Viewed with the ophthalmoscope the disk and the blood vessels perforating it are magnified about 15 times. While the vessels appear distinctly it should be remembered that they are actually microscopic and the walls are extremely thin. With the exception of the area near the disk the vessels are seen as blood columns that diminish in size as they branch and disappear into the capillary bed of the retina. Arteries and arterioles differ markedly in this structure. Arterial disease is not arteriolar disease and vice versa. Arteriosclerosis and atheroma of the arteries are represented in arterioles as hyalinization of the entire vessel wall.

There are no symptoms of retinal arteriosclerosis or arteriolar sclerosis except that vision may be affected in case of hemorrhages near the macula or if embolism or thrombosis occurs. In the normal state pulsation noticed in the central artery of the retina may be due to a lateral movement of the vessel. Actual dilatation of arterioles near the disk can be seen in some states of hypertension. As the vessel walls of the retina become thicker and harder the light reflex broadens and becomes copper-colored, curves tend to straighten out and where an arteriole crosses a retinal vein the latter, since it has thinner walls, is depressed, causing a noticeable disten-

tion of the vein. The arterioles become irregular in caliber and in advanced states may become constricted to the extent that they do not carry blood. Then they appear as white, threadlike, fibrous lines. Tiny aneurysms are sometimes seen. In severe arteriosclerosis all these changes can be seen; they present a distinctive diagnostic appearance.

In addition to changes attributed to and indicative of arteriosclerosis the fundi reveal the effects of other disturbances elsewhere in the body. Signs of renal complication and of diabetes are frequently found on an arteriosclerotic background but, while their signs are suggestive of complications, other observations are necessary to make a definite diagnosis.

The relationship of hypertension to atherosclerosis is complex. In economically developed countries such as the United States, elevated blood pressure is associated with a several-fold increase in risk of developing clinical atherosclerotic disease, e.g. myocardial infarction, in middle age. This finding has been observed in both men and women. Correspondingly, autopsy studies in groups matched by such variables as age, sex, ethnic origin and so forth reveal that hypertensives invariably exhibit more severe atherosclerosis on the average than normotensives.

It should be emphasized that a high percent of adults in populations such as our own exhibit some atherosclerosis, whether normotensive or hypertensive. Freedom from atherosclerotic disease is relatively rare. The problem, therefore, is the degree of atherosclerosis in normotensives, versus hypertensives. Abundant data are available demonstrating that hypertensives have more severe atherosclerotic disease morphologically and greater risk of clinical episodes than normotensives. Data in laboratory animals confirm that hypertension intensifies atherogenesis in ani-

mals eating diets high in fat and cholesterol^{1,5}

The familiar retinopathy of diabetes is still a subject of intense study. While the general pattern of discrete hemorrhagic dots over the central posterior fundus is indicative of the disease the differentiation from similar pictures is not always easy. Not uncommonly one finds diabetes in hypertensives with fundus changes due to both conditions. There is a zone of overlapping in which the symptoms of two or more conditions appear in which it is not possible to attribute them to either one. This does not diminish the diagnostic value of the fundus observations. Pathognomonic findings are limited to chronic or advanced stages of the underlying condition.

Typical fundus pictures are described in or attributed to specific systemic diseases including syphilis, leprosy, tuberculosis and other diseases. The eye examination often supports a clinical diagnosis based on other data. Fundus symptoms of blood disease, leukemia, anemia, of degenerations such as Tay-Sach's disease and cerebromacular degeneration, may be important as they appear early, often before other leading symptoms.

The eye is the most valuable source of diagnostic symptoms of nervous disorders of any of the special sense organs. The optic nerve and the retina are so closely affiliated with the central nervous system and its function that symptoms of brain lesions are found ophthalmoscopically and by examination of the visual field. The optic disk is the most prominent feature in the fundus. Its size, shape, color and content are so characteristically changed by diseases that affect the brain that ophthalmoscopy and perimetry are included in all neurologic examinations.

The name given to a true inflammation of the optic nerve is papillitis and when it occurs it is almost invariably part of a so-called neuro-

retinitis, i.e., an inflammation affecting jointly the retina and the optic papilla. Fullness of the disk is also caused by intracranial pressure brought by brain tumor. The ophthalmoscopic picture is similar to that of papillitis but the experienced examiner will usually make the distinction. The progress of intracranial lesions that produce changes in the disk can be gauged ophthalmoscopically. When the central nervous symptoms progress rapidly the bulging of the disk may be accompanied by extensive retinal hemorrhages that confuse the picture with inflammatory situations.

The optic nerves are situated in the base of the brain at a vulnerable zone and are subject to pressure directly from neighborhood lesions or indirectly from increased intracranial pressure. Posterior extensions of the optic nerves, the optic tracts and optic radiations are also affected by pressure from adjacent structures. The course of the visual nerve fibers from the retina to the occipital cortex determines a visual field pattern that is used to locate lesions along their pathway. The charting of visual fields may not be a diagnostic procedure but is often the most precise localizing means and may be helpful in distinguishing the character of the central lesion, i.e., in differentiation between a tumor and an aneurysm. The science of perimetry has developed into a most valuable diagnostic aid. It applies both in local diseases of the eye and in general systemic and in neurological diseases.

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CHIROPRACTIC SOCIETY HONORS LACC PRESIDENT

by ROGER BECK

More than 300 persons recently paid tribute to Dr. George H. Haynes, president of the Los Angeles College of Chiropractic, at a testimonial dinner given him by the Los Angeles County Chiropractic Association. The dinner was at the world famous Cocoanut Grove, in Los Angeles.

Doctors and their families, patients, and dignitaries from across the nation were there to honor Dr. Haynes for his many years of dedication to the profession and for his untiring efforts which contributed much to the recent achievement of chiropractic accreditation by the U. S. Department of Health, Education and Welfare.

The featured speaker was Dr. William H. Bromley of Audobon, New Jersey, president of the American Chiropractic Association.

Dr. Paul DeLoe, of Santa Ana, president of the California Chiropractic Association presented Dr. Haynes with a plaque, in behalf of the state association.

The Reverend Brother Anthony P. Smulders, Associate Dean of Science for Loyola Marymount University, expressed the honor felt by his university in numbering Dr. George Haynes among its alumni. After graduating from Loyola, Haynes earned his professional degree from the Ratledge College of Chiropractic, and was licensed to practice in California in 1937.

On behalf of the sponsoring Los Angeles County Society, its president, Dr. Paul Malapira, lauded Dr. Haynes for his accomplishments, and presented him with a handsome custom-made solid gold ring bearing the chiropractic insignia, and studded with diamonds.

Dr. Robert Jackson of Concord, California, ACA District Governor, expressed the national association's sentiments with a beautiful silver dish.

Dr. Haynes also was pleased to receive a Certificate of Appreciation signed by 350 faculty members, employees and students of Los Angeles College of Chiropractic. It was presented by Dr. Paul Schultz, of the LACC Department of Chemistry.

Dr. Haynes' wife, Edna, shared some of the spotlight with her famous husband and was presented two lovely bouquets of roses.



Dr. Paul Schultz (left) presents Certificate of Appreciation to Dr. George H. Haynes

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Dean of the Los Angeles College of Chiropractic

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5. To factually establish the importance of normal structure to the physiological function of the neural system.
6. To demonstrate the mechanism by which structural distortion is the locus of neural dysfunction and subsequent organ and/or aberration with symptoms and signs.
7. To assure that degree of knowledge in the basic and clinical sciences essential to a generalist.
8. To provide that degree of skill and knowledge in the art of diagnosis to, at least, determine those cases in which adjustive and manipulative methods would be contra-indicated, and to maintain the prestige of the profession in the clarity and depth of knowledge displayed in reports to insurance carriers, governmental and legal agencies.
9. To thoroughly establish in the minds of students that chiropractic recognizes health as an entity and disease as a deviation of function and structure from the ideal homeostatic state.
10. To utilize the biological facts to demonstrate the multiplicity of causes, mechanical, chemical and/or psychological, which overcome resistance, or the homeostatic state, to result in structural distortion, subluxation, especially of the spine.
11. To demonstrate that vertebral aberrations of function or relationship are constant findings, primary or secondary, in every deviation from health, although not necessarily the focus of primary care in some instances.
12. To demonstrate that the subluxation is much more than a mechanical interference with neural function, but may encompass cybernetic, bio-feedback, facilitatory focus, etc., effect.
13. To teach each subject, especially the basic sciences, in the context of need of a general practitioner of chiropractic, rather than as a major in a graduate program.
14. To emphasize those areas of each subject of practical significance with the depth necessary for successful licensure examination passage.
15. To utilize the integration of the neural system in each subject that the whole curriculum may be a unified educational experience, encouraging the graduate to continue the quest for greater depth of knowledge.
16. To assure the student the ability to recognize by physical examination, X-ray and instrumental means, signs and symptoms of anatomical disrelations, most particularly vertebral subluxations.
17. To identify, classify and describe the varied subluxations.
18. To impart the mind-body coordination and skill to master the anatomical corrective methodology peculiar to the art of chiropractic and instill an appreciation of the need to continue to refine this art by diligent practice of the correct principles of articular adjusting.
19. To encourage the development of a sense of ethical, humanistic, legal and community responsibilities as a doctor of chiropractic, as well as the principles of successful patient and office management.

THE CREDIT UNION STORY

One of the outstanding organizations in the chiropractic profession is the California Chiropractic Credit Union, with new offices in North Hollywood, California. The Secretary-Treasurer-General Manager of the Credit Union is Dr. F. Maynard Lipe, who recently retired from active practice in order to assume Credit Union responsibility. The president of the union is Dr. Gustav M. Allman and the vice-president is Dr. Glenn Olson.

The following is an interview with Dr. Lipe.

Q: *What is a credit union?*

A: A credit union is people! People bonded in a common interest who pool resources, and who save money and borrow money from these pooled resources. This is done with the least amount of expense to the members. The Credit Union pays dividends to its members commensurate with the economics of the times.

Q: *Who owns the Credit Union?*

A: It is owned by the investor-members, those who belong to it.

Q: *Who controls it?*

A: There are several controls. Its affairs are administered by a Board of Directors. Another control is by the State of California, whose Commissioner of Corporations causes the books to be audited, and sees that the Union is operated in conformance with the regulations of state chartered credit unions. These supervisory and regulatory functions are a part of the laws of the State of California.

Q: *Then the Credit Union is a chartered organization?*

A: It certainly is!

Q: *Who are the Directors?*

A: Of course, these change from time to time, with elections that are held in conformance with the by-laws. Presently serving on the Board of Directors are Doctors Herbert T. Burgess, Carroll T. Lowery, Marcus I. Brown and Bernard W. Steuber.

Q: *Does the California Chiropractic Credit Union have anything in common with other credit unions?*

A: The California Chiropractic Credit Union is a member of the California Credit Union League. These member unions ably assist one another in the operation and promotion of credit unions.

Q: *You mentioned dividends. Can you enlarge on this?*

A: Yes. Dividends are declared annually by the Board of Directors, and are in keeping with the rising trends and present costs of operation.

- Q: *How do Credit Union dividends compare with those of banks and savings and loan associations?*
- A: Of course, dividends paid by all organizations fluctuate, but in the main, credit union dividends may be as much as 1.25% more than the other types of organizations you mentioned
- Q: *Could a member plow his dividends back into his account, thus earning more?*
- A: He certainly could, and many do. That is the type of financial management that we encourage. The member can, of course, take his dividend out, if he wishes to, — it's his choice.
- Q: *To some people "union" is a somewhat loaded word. Is there any connection between the California Chiropractic Credit Union and, say, the Teamsters, Auto Workers, or any of the large and powerful labor unions?*
- A: A credit union is a "union" only in the sense that members with a common bond have a distinct and singular purpose. It has nothing to do with labor unions.
- Q: *Is the Credit Union controlled by a national or state chiropractic organization?*
- A: As I stated before, the California Chiropractic Credit Union is controlled by the Board of Directors, conforming to the laws of the state. No other organization concerned with the chiropractic profession has any control over the Credit Union.
- Q: *Do you openly solicit savings or loans?*
- A: Indeed we do. We encourage the members of the profession to affiliate with, and utilize the resources of the Credit Union.
- Q: *Who is eligible for membership — or, stated another way, who may save or borrow?*
- A: First of all, to save or borrow one must be a member, in other words, a share holder. Now to answer your question more specifically, a member of a chiropractic organization, the CCA, the ACA, the ICA, the ICAC or the LACC Alumni Association, or, in many cases, members of the office staff of such a doctor.
- Q: *For what purposes would loans be available to these people?*
- A: For provident and productive purposes. Most loans are made for office equipment, new automobiles or recreational vehicles, for updating X-ray or other modalities, for office furnishings, hard goods, appliances, and for many other things.
- Q: *What about Debt Consolidation Loans?*
- A: Many do borrow for that purpose - and it's a wise financial move in many instances.
- Q: *What changes or improvements have been made since you have become the manager?*

A: One thing that gives us great pride is that we have moved out of very old, unattractive and inadequate quarters to new and modern offices that are more centrally and conveniently located. We have made changes in the office personnel that have resulted in faster and better service. We have installed a new system of record retrieval and storage that saves much time and space. We are now in a position to offer financial counselling.

Q: Our goal is 5 thousand members and 5 million dollars. When that happens, chiropractic will assume a new and more powerful place in California. As the Credit Union grows in dollar volume and members, we plan to offer many other services to our members, such as free travelers checks, group buying at discount prices, and many more such services. I would like to invite the members of the chiropractic profession to avail themselves of the services of the California Chiropractic Credit Union. We want active members! Shares are available to those qualified to hold them.

I sincerely believe that membership in the Credit Union is one of the most valuable affiliations the doctor can have.

In Memoriam

Dr. Glen Mobre
Harbor, Oregon

†

Dr. John R. Watson
Santa Clara, California

†

Dr. Andrew Beeman
San Bernardino, California

†

Dr. Melvin G. Gateman
Chico, California

†

Dr. J. Ben Pubath
Cedar Rapids, Iowa

†

Dr. Cecil Gano
Jacksonville, Florida

Dr. Floyd A. Wood
Pendleton, Oregon

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Dr. G. E. Handkins
Cheney, Kansas

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Dr. Charles R. Stiles
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Dr. Douglas Jeppsen
Sutter Creek, California

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Gale Bradley (student)
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DR. JAMES COMPTON, CHIROPRACTIC PIONEER PASSES

We regret to report to the profession the passing of one of California's chiropractic pioneers, Dr. James Compton, who passed away at Palm Desert, California.

Dr. Compton's name appeared a number of times in the book, *The Rise of Chiropractic*, by Chittendon Turner, copyrighted in 1931 and published in Los Angeles. This book, now out of print, is a fascinating history of the early struggles of the profession, and of things as they were in the early part of this century.

The first reference to Dr. James Compton was reported in 1917, when he organized the Alameda County (Calif.) Chiropractic Society.

He was a close friend and associate of the late Dr. T. F. Ratledge, and shared in Dr. Ratledge's many trials and tribulations.

Dr. Compton served on the first California Board of Chiropractic Examiners, brought into being when the profession became licensed in California. He was appointed to the Board by Governor Friend W. Richardson, for a term of three years. Prior to licensing, he, along with many others of that day, served time in jail for having dared to practice chiropractic in the state.

The next reference to Dr. Compton notes that he was Secretary to the Board of Examiners in 1922.

The early years of chiropractic were marked by much persecution and in addition to outside pressures, experienced much in-fighting among various groups. Dr. Compton's efforts were to establish peace among the various factions, and to progress the profession.

A very interesting episode occurred during his tenure on the State Board.

The Board had had its hands tied because of court procedures, and was ordered to hold no more examinations, nor to issue no more licenses until disposition of the court matter.

In defiance of this, the Board met in secret in Oakland and in Los Angeles, and issued licenses to 220 candidates.

The State Supreme Court held that no cognizance could be taken of the illegal act, and all five members of the Board were ousted. The Governor reappointed Dr. Compton along with four new members, and the Board was in business again.

In 1928 he became editor of the monthly California Chiropractic Bulletin, trying to stimulate the doctors to pay their yearly license renewal fees, and avoid having their licenses suspended. That was a big problem at that time.

Dr. James Compton was a pioneer - a real fighter. He was colorful and left his mark on the profession. He helped to give chiropractic birth, and was one of the few of that era to live to see it mature and grow into what it is today.

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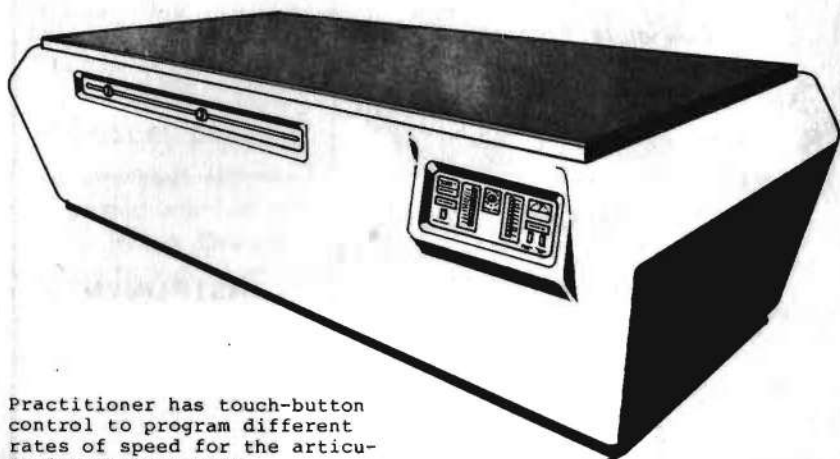
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